

As lithological and palaeontological studies advance, research will be carried on in organic and inorganic geochemistry of sedimentary rocks. In addition it is anticipated that regional geophysical investigations will support structural and stratigraphic research being carried out in the Institute.



The Building

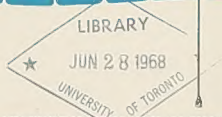
The building, costing \$2,500,000, is built on a 15-acre site donated by the City of Calgary adjacent to the University of Calgary. There is ample room for expansion.

The two-storey structure provides approximately 90,000 square feet of floor space for offices, laboratories, research library, and sample and core storage. The number and size of offices and laboratories can be varied by use of movable walls. An excellent library is open to the scientific community, and inter-library loans will provide service to industry, other government agencies and to universities.

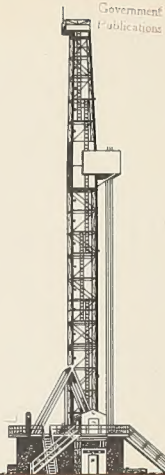
Rock-chip samples from every petroleum exploration well drilled in Manitoba, Saskatchewan, Alberta, British Columbia, the Yukon and Northwest Territories are obtained through the courtesy of the provincial and federal governments. More than seven million samples, washed and bottled by the Alberta Conservation Board, are now stored in the new building.



**INSTITUTE
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& PETROLEUM
GEOLOGY**



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Background

The discovery of the Leduc field in 1947 and the beginnings of a major oil industry in Western Canada created an urgent need for rapid distribution of basic geological information by an impartial agency. The Geological Survey of Canada opened a small office in Calgary in 1950 to meet this need.

Calgary was ideally located for this office because the city was by that time the headquarters of the oil industry. The Alberta Oil and Gas Conservation Board and major oil company offices were established there. Turner Valley, the only large oilfield in Western Canada before Leduc, lay twenty miles to the southwest.

Though the Calgary office was small the work had many facets. The staff scientists were engaged in basic research on the subsurface rocks of Western Canada, particularly of Devonian and Cretaceous age, which contain important oil and gas reservoirs. The scientists were, therefore, in great demand to discuss problems with geologists in industry. In addition a repository was established for samples from all wells drilled in Western Canada and for cuttings and core from wells drilled in the Yukon and Northwest Territories; the samples constitute an up-to-date library of basic geological information for industry and government scientists alike.

A measure of the need for the Calgary office and of its success lies in the continuing demand for information on the geology of the western provinces and of the territories.

While subsurface studies were increasing in number and scope, the surface studies being carried out by Ottawa-based geologists in the Foothills and Rocky Mountains and in the Western Interior Plains were also increasing. It became apparent these two areas of study should be more closely coordinated if the Geological Survey were to serve an increasingly useful role to industry, to government and to science.

As a result plans were made in 1960 to expand the Calgary office and to provide a new building for its staff.

Concurrent with the completion of this building early in 1967, the Institute of Sedimentary and Petroleum Geology was established as a fundamental research arm of the federal government.

The initial complement of the Institute comprises 85 scientists and support personnel. There are in addition five geologists engaged in studies of the Pleistocene geology of Western and Northern Canada, and four in groundwater investigations of the Western Interior Plains. The Calgary staff has been and is being augmented by transfer of scientists from Ottawa as well as by recruitment, as part of the orderly, planned growth of the Geological Survey.

The Institute

The Institute will provide basic scientific information to industry, universities and to other government agencies as well as carry on basic research into fundamental problems of geology. The scope of its research program will extend to as many facets of the geology of the sedimentary basins of Western and Arctic Canada as requirements and resources permit.

Six areas of research are being actively pursued and plans for two others are being seriously considered. The areas and objectives are as follows:



General Geological Investigations. Systematic geological investigations to provide texts, maps and other graphic models. These investigations will give regional and topical coverage as a basis for understanding the geological history of Western and Northern Canada.

Geology of Oil and Gas. Investigation of the geological standards employed in finding economic concentrations of oil and gas; assessment of regions and geological stages for their economic potentialities; determination of various classes of reserves; and research into the origin, accumulation and migration of oil and natural gas.



Lithological Studies. Research on carbonate, clay, evaporite and clastic rocks, their mineralogy, petrography, primary structural features, depositional environment and classification. Experiments in sedimentology will be conducted to clarify the mechanics of formation of these rocks.



Biostratigraphy and Systematic Palaeontology. Study of fossil shells, plants, pollen and spores in order to provide basic information for dating sedimentary rocks and for establishing the sequence and evolution of fossil animals and plants.

Regional Stratigraphy. Definition as three-dimensional bodies, surface and subsurface stratigraphic units; interrelation of these bodies on a local and regional scale; and documentation of the historic record of the geography of ancient lands and seas and their deposits.



Tectonism and Structural Geology. Investigation of the sequence, form and habit of deformation of layered sedimentary bodies; experimental investigations in structural mechanics as related to the geological evolution of mountain systems.

